NC FIMAN

The Past, Present and Exciting Future



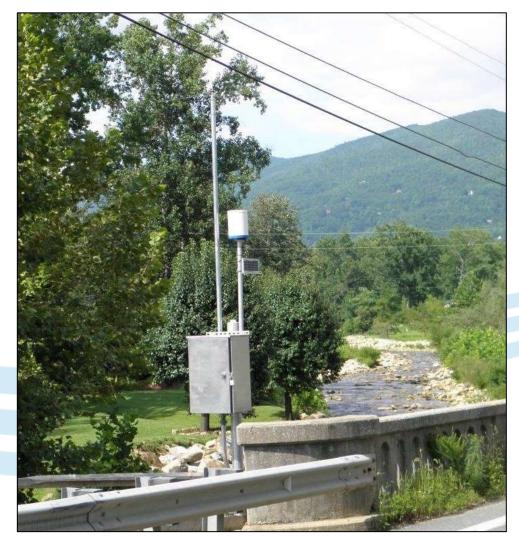


N.C. Flood Warning Program Goals

- Real-time flood inundation and forecast maps and alerts
- Better information & visually oriented products to aid risk-based decisions
- Prevent and reduce the loss of lives and property



Example NC River Gage Station Installation

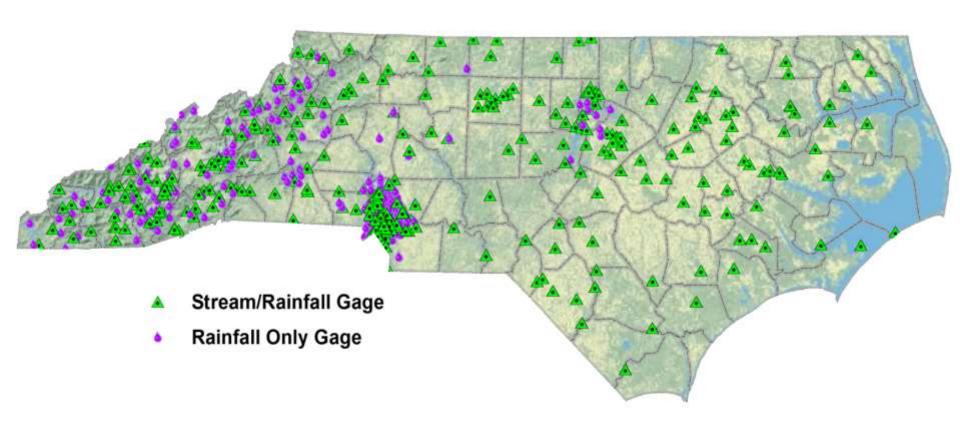






North Fork Catawba River at US 221

FIMAN Data Sources





What is an Inundation Library?

"Library" of flood inundation mapping near gaging stations

- + Gaging Stations
- + Telemetry
- + Pre-made inundation libraries
- + Web tool to efficiently communicate

Real-time flood mapping solution



N. Fork Catawba River @ HWY 221



What is a Library

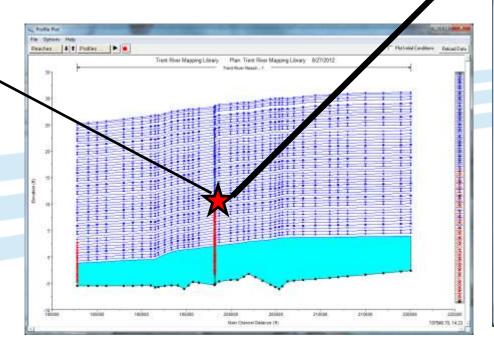
Polygon derived from a hydraulic model

Every ½ foot there is a new area

"Stage" target in each model.

This is station location







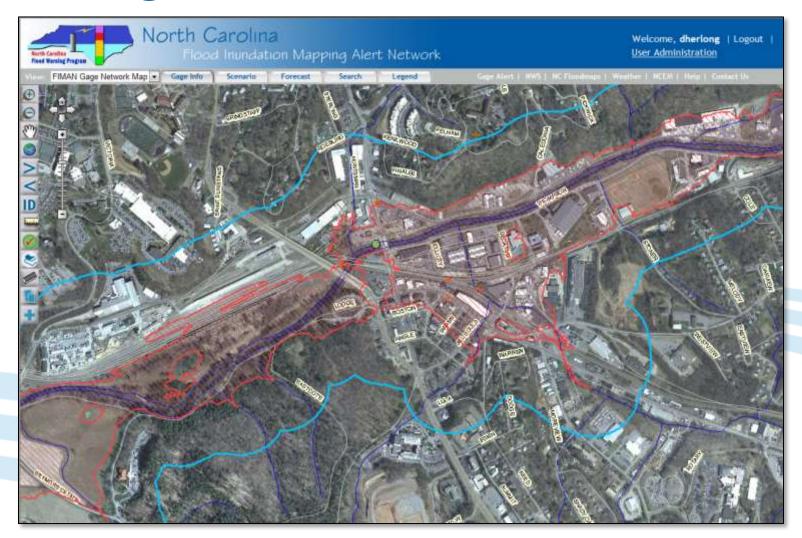


After the modeling – maps created!





The Original FIMAN: 2008





Then and Now

2008 FIMAN

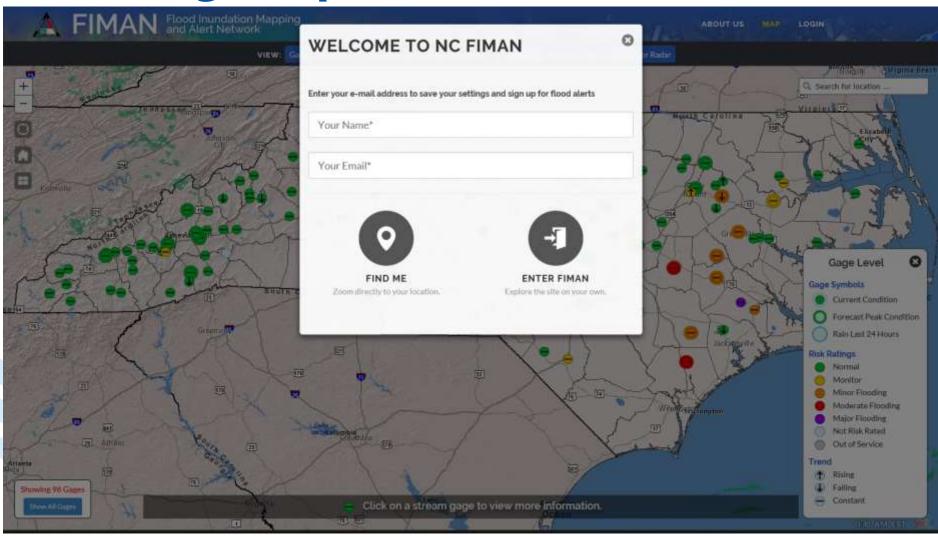
- 90 gages (NC Owned)
- Stage only
- Libraries + Scenarios
- Password protected

2016 FIMAN

- 540+ gages (NC + USGS)
- Stage, Flow and Rain
- Libraries + Scenarios
- Public
- Forecast
- Charts
- Property Impacts
 - Counts by Occupancy
 - Estimate \$ Damages
- Alerting
- Summary Reports
- Administrator Tools

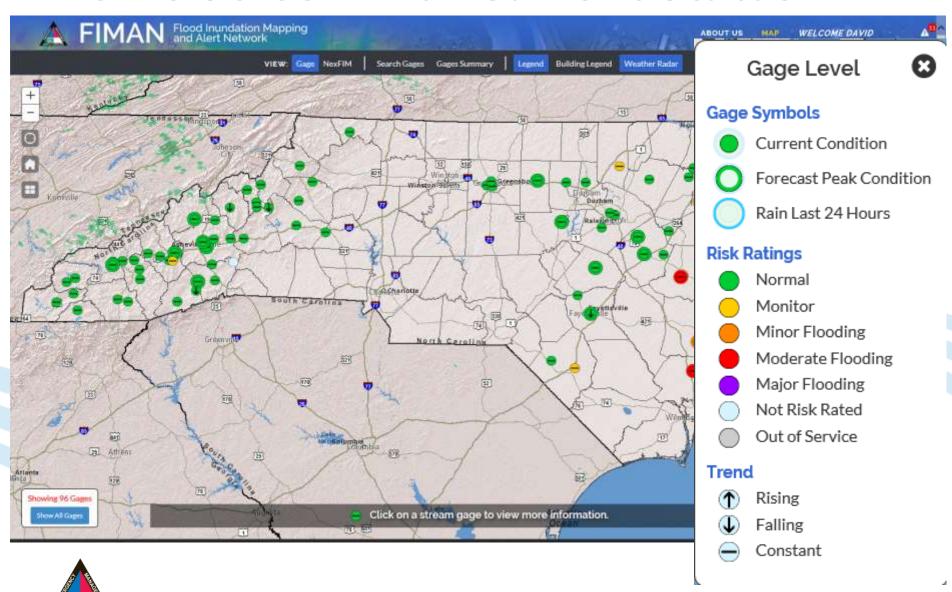


Site Login Options

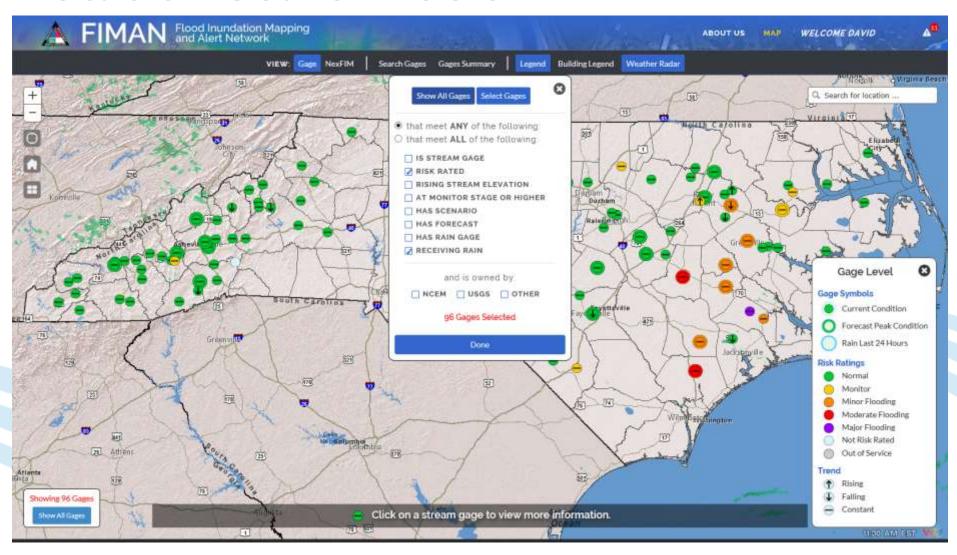




Home Screen with Current Status

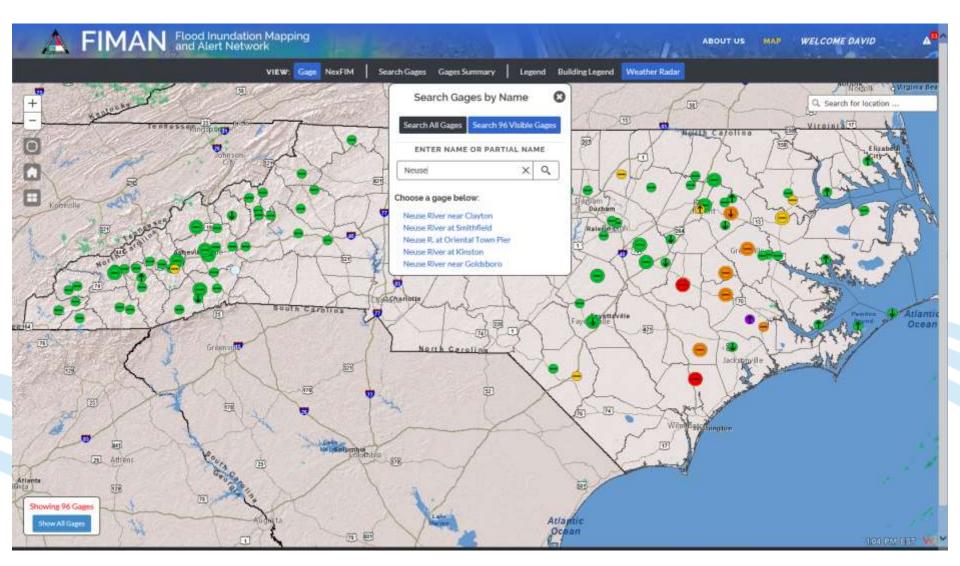


Station Search Tools



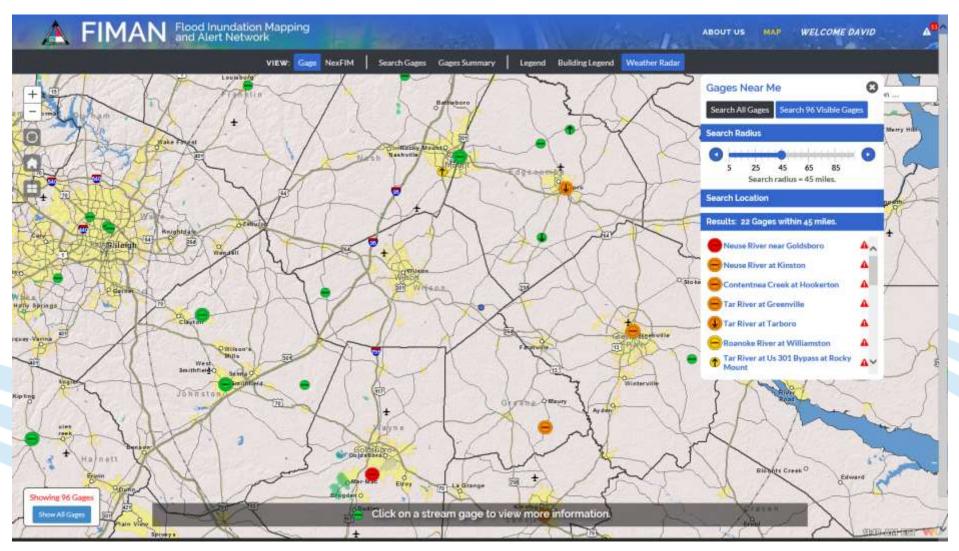


Station Search Tools



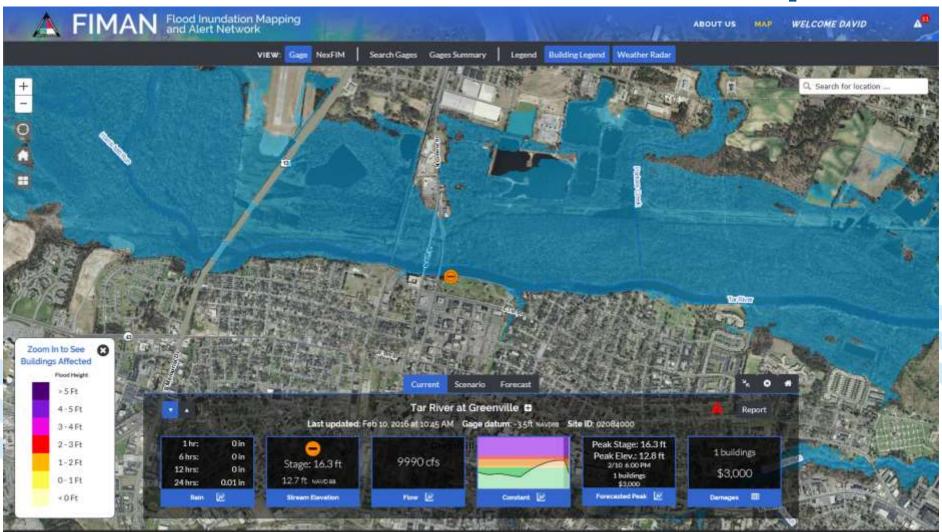


Stations Near Me Tool



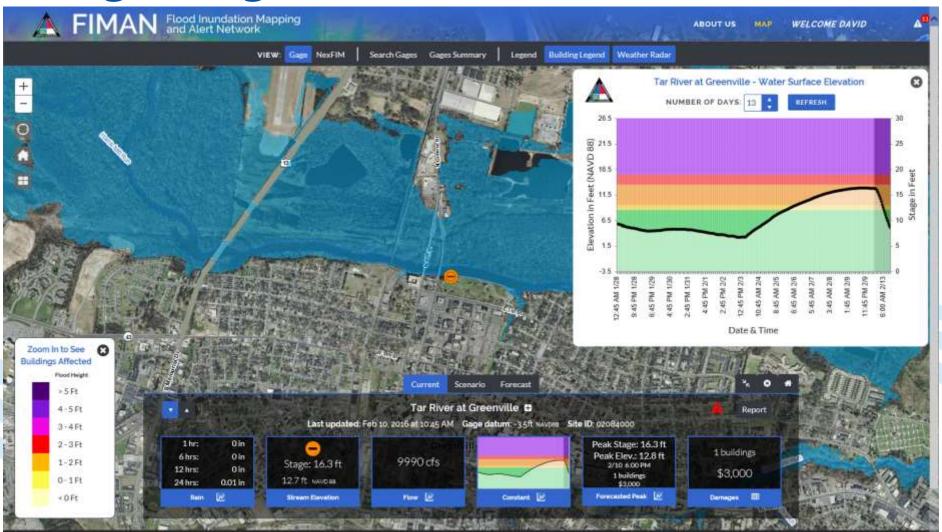


Current Inundation Level and Map



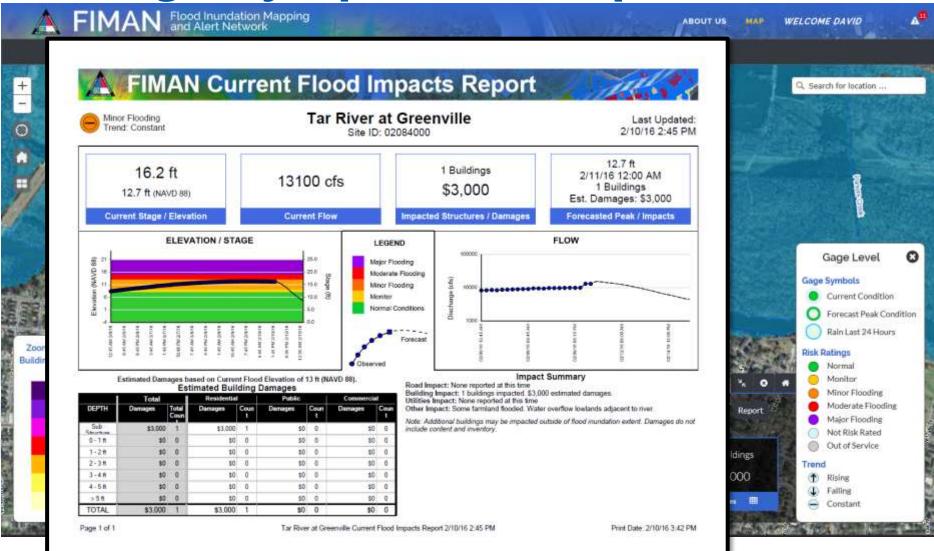


Gage Stage Charts + Forecast



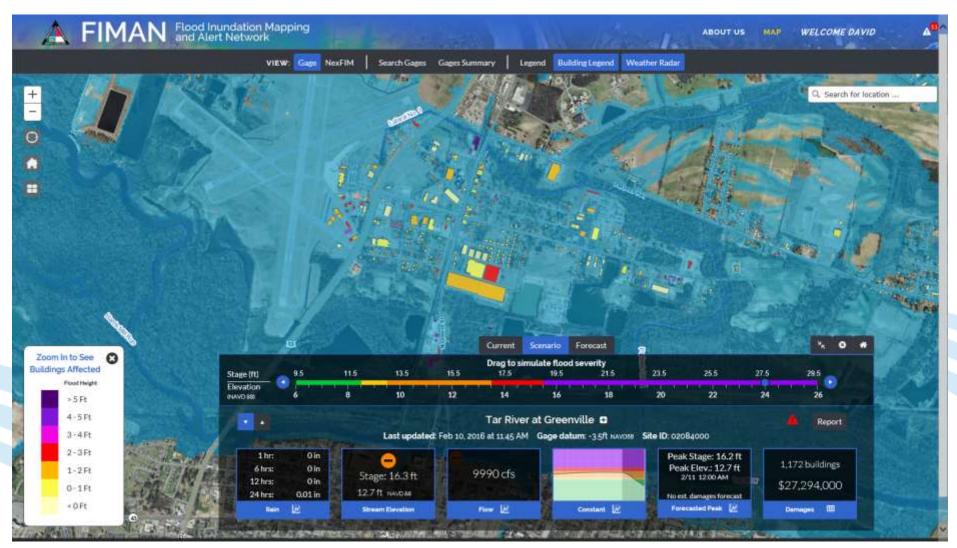


Emergency Op. Center Reports



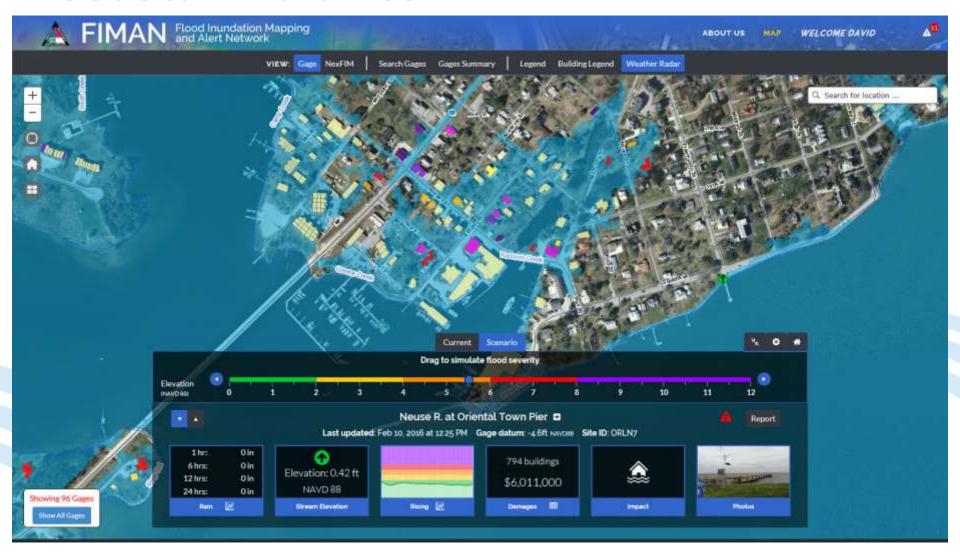


Flood Scenario Mode



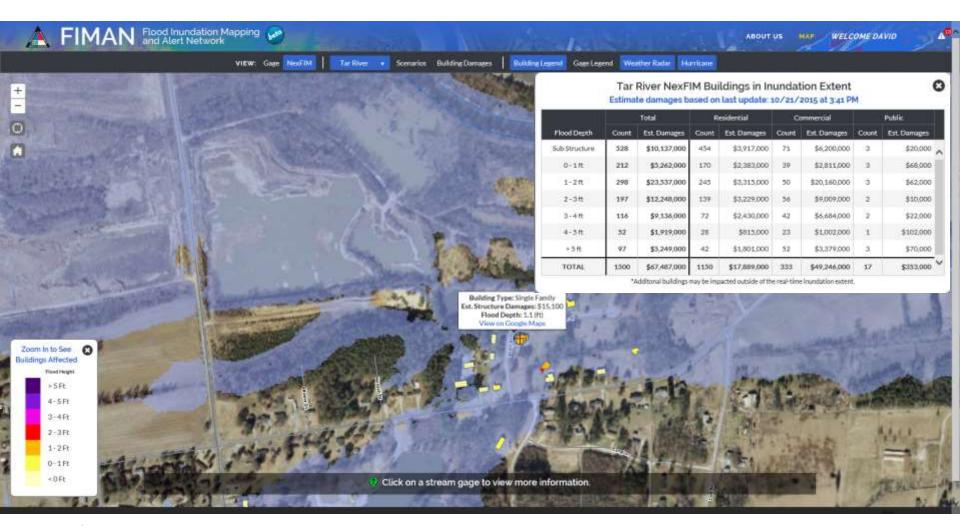


Coastal Libraries



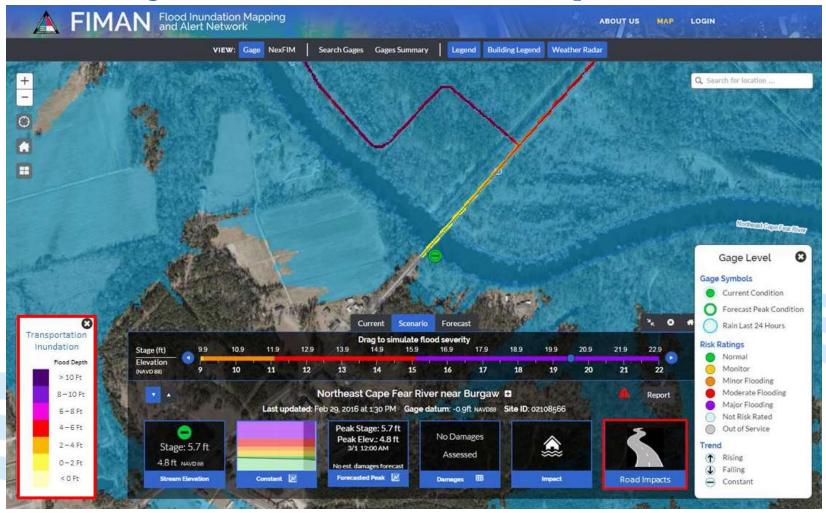


NexFIM Inundation Mapping





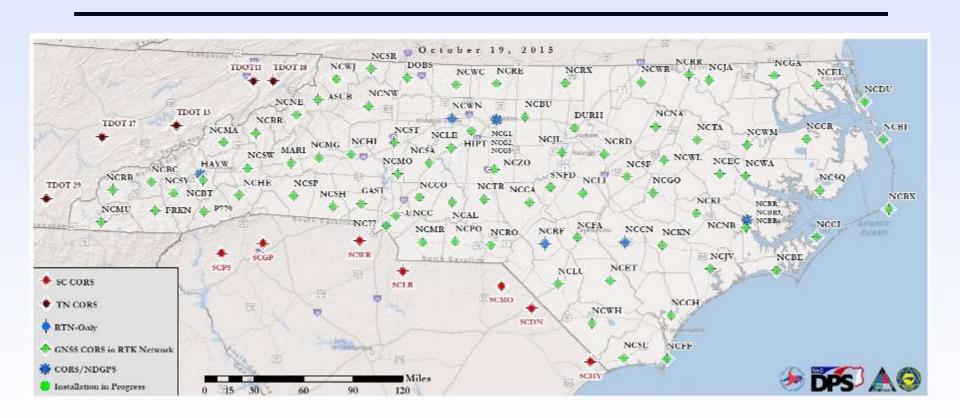
Roadway Infrastructure Impacts





County	Gage ID	Road Name	Flooding WSEL	Max Inundation	Length of Road Overtopped
Pender	2108566	NC-53	20 ft	6.7 feet	0.5 miles
Pender	2108566	Cape Fear Dr	20ft	7.5 feet	0.8 miles
Pender	2108566	River Bend Dr	20ft	12.1 feet	1.4 miles

NC CORS Network









CORS/RTN

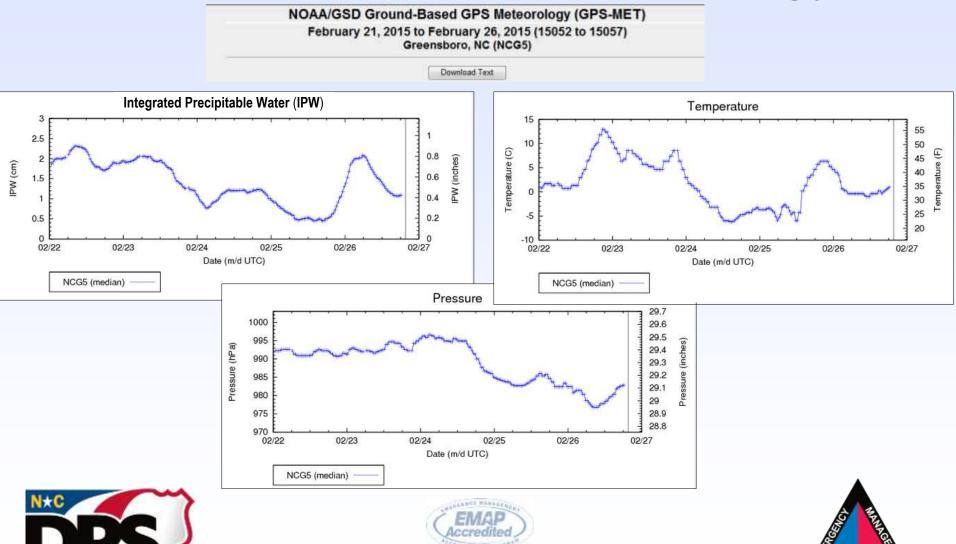
- Weather sensor installed at CORS to support FIMAN
 - CORS statewide coverage would provide statewide realtime weather data
 - Installing a weather sensor at a western NC CORS (test site)







Ground-based GPS Meteorology



North Carolina Emergency Management

DEPARTMENT OF PUBLIC SAFETY

Questions?

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